

## Brightwell, Leola

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**From:** Turner, Nardina  
**Sent:** Thursday, February 11, 2016 1:31 PM  
**To:** Saskowski, Ronald  
**Subject:** FW: R4 LIMS Results: Project 13-0116, C130213 OCP 02 04 13 1116  
**Attachments:** C130213 OCP FINAL 02 04 13 1116.PDF; C130213 OCP FINAL 02 04 13 1116 - 13-0116 - SMOKEY MOUNTAIN SMELTERS 02-04-2013.110009331222.Dat

**From:** R4LIMS  
**Sent:** Monday, February 04, 2013 10:46 PM  
**To:** Kestle, Wendell <Kestle.Rusty@epa.gov>  
**Cc:** Turner, Nardina <Turner.Nardina@epa.gov>; terence.chuhay@jmwaller.com; cj.roebuck@jmwaller.com; Hendel, Jeffrey <Hendel.Jeffrey@epa.gov>; Maycock, Marilyn <Maycock.Marilyn@epa.gov>  
**Subject:** R4 LIMS Results: Project 13-0116, C130213 OCP 02 04 13 1116

On Monday, February 4, 2013, results for the following were released by the Region 4 Laboratory:

**Analyses:**  
Organochlorine Pesticides (OCP)

**Project Number:** 13-0116  
**Project Name:** Smokey Mountain Smelters  
**City:** Knoxville **County:** Knox **State:** TN

**These results were reported by:**  
**Jeffrey Hendel** ( E-mail: [Hendel.Jeffrey@epa.gov](mailto:Hendel.Jeffrey@epa.gov) )

If you have questions concerning the laboratory results, please feel free to contact the laboratory personnel shown above as having reported the data. We also encourage you to provide feedback to the Region 4 laboratory by filling out our online (*EPA internal network only*) [Customer Survey Form](#).

**These results are for the following Sample Type(s):**

Water (Equipment Rinse Blank)  
Water (Groundwater)

### **PDF DATA RESULTS REPORT FILE ATTACHMENT:**

An Adobe Acrobat PDF file is attached to this message that contains final results for the analyses as indicated in the data report.

### **DATA EXPORT FILE ATTACHMENT:**

If attached, data export files will be tab delimited ASCII text files contained in a file that has been formatted using the ZIP archiving format (.Dat extension). Please consult your local computer support personnel if you have problems extracting these files. If you have questions about the data file formats and the information contained in these files, or if you would like to request export files for previously reported data, use the contact information shown below to contact the appropriate person with your concerns. To generate export files for previously reported data we'll need the name of the PDF report file that was attached to the original transmittal message.

For questions concerning this message and attachments, or any other LIMS or data reporting issues, please call the SESD PC Hotline at 706-355-8825 or send an email to [r4lims@epa.gov](mailto:r4lims@epa.gov).

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 4 Science and Ecosystem Support Division  
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 13-0116

Project: 13-0116, Smokey Mountain Smelters - Reported by Jeffrey Hendel

**February 4, 2013**

**4SESD-MTSB**

**MEMORANDUM**

**SUBJECT:** FINAL Analytical Report  
Project: 13-0116, Smokey Mountain Smelters  
Superfund Remedial

**FROM:** Jeffrey Hendel  
Quality Assurance Section Chemist

**THRU:** Marilyn Maycock, Chief  
Quality Assurance Section

**TO:** Rusty Kestle

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the associated contract Statement Of Work (SOW). In general, project data quality objectives have not been used to evaluate these data prior to release by the Quality Assurance Section. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report.

Analyses Included in this report:

Method Used:

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**Organochlorine Pesticides (OCP)**

Organochlorine pesticides

CLP Pesticides (Water)



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**Report Narrative** for Work Order C130213, Project: 13-0116  
Site Name: Smokey Mountain Smelters, Knoxville, TN  
CLP Case No. 43195, ELEMENT Sample Nos. C130213-02-11, 13  
C130214-02, 05-07 (PES only)

Organic Analysis: Chemtech Consulting Group, Inc., Mountainside, NJ

The ESAT Work Team reviewed data for eleven (11) water samples analyzed for Volatile Organic Compounds, Semi-Volatile Extractable Organic Compounds, Pesticide Compounds, and PCB Aroclors per CLP Statement of Work SOM01.2. The samples were collected between 12/11/12 and 12/13/12, and were received by the laboratory on 12/13/12 and 12/14/12. The final data package was received on 01/04/13 by the USEPA Quality Assurance Section, Region 4 SEDS/MTSB. The analytical results were reported in one sample delivery group (SDG) by the laboratory. In addition to the field samples, the laboratory also analyzed four performance evaluation samples (PES) for evaluating the laboratory's performance with using the methods.

The laboratory satisfied all technical analysis and extraction holding time requirements. A Stage 4 validation consisting of an electronic/manual review (S4VEM) was performed on the organic samples submitted for this case. The data package presents acceptable technical performance with qualifications.

All results associated with erratic initial and/or continuing calibration performance were "J" flagged with the appropriate Element qualifier (CLP16 and/or QC-1). Deuterated monitoring compounds (DMC) are used as surrogates in each sample for GC/MS analysis to monitor extraction efficiency.

Data quality factors requiring qualification of results are discussed below:

### **Volatile Organic Compounds**

The laboratory encountered a poor instrument response for Acetone in the initial calibration performed for this Case. All acetone results were qualified "R" (CLP17).

The percent recoveries for DMCs were less than the lower quality control limit in samples C130213-11 and 13. All compounds associated with an out of control DMC were "J" qualified (QS-3).

### **Semi-Volatile Extractable Organic Compounds**

The laboratory scored within warning limits for all spiked analytes in the PES except for Caprolactam, which was scored as action low, and Hexachlorocyclopentadiene, which was scored as warning high. All Caprolactam results were non-detects and qualified "R" (CLP27), and Hexachlorocyclopentadiene results did not require qualification since there were no positive detects.





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The percent recovery of the DMC 4-Chloroaniline-d4 was less than the lower quality control limit established in the method and less than 10% in samples C130213-02 and 13. The compounds associated with this out of control DMC; 4-Chloroaniline, Hexachlorocyclopentadiene, and 3, 3'-Dichlorobenzidine were qualified "R" (QS-4).

The percent recovery of the DMC 4-Chloroaniline-d4 was within the quality control limits established by the method and less than 10 in sample C130213-11. These compounds associated with this DMC; 4-Chloroaniline, Hexachlorocyclopentadiene, and 3, 3'-Dichlorobenzidine were qualified "J" (QS-4).

The percent recoveries of DMCs were less than the quality control limit in samples C130213-02, 11, and 13. All compounds associated with an out of control DMC were qualified "J" (QS-3).

#### **Pesticide Compounds**

There no anomalies associated with the pesticide analysis requiring additional qualification of data.

#### **PCB Aroclors**

There no anomalies associated with the PCB Aroclors analysis requiring additional qualification of data.

Data qualification factors are explained by the Region 4 - specific qualifier definitions which are included elsewhere in this report. Further details are provided in the complete data review report, which is on file in the Region 4 SESD Records Center.

cc: Nardina Turner



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**SAMPLES INCLUDED IN THIS REPORT**

**Project: 13-0116, Smokey Mountain Smelters**

**Contract Lab Case: 43195**

Sample ID	Laboratory ID	MD#	D#	Matrix	Date Collected
SMSRB121212	C130213-02	72F6	72F6	Equipment Rinse Blank	12/12/12 11:30
SMSMW01A	C130213-04		72F7	Groundwater	12/13/12 14:45
SMSMW02A	C130213-05		72F8	Groundwater	12/13/12 13:49
SMSMW03B	C130213-06		72F9	Groundwater	12/13/12 11:15
SMSMW04A	C130213-07		72G0	Groundwater	12/13/12 08:59
SMSMW07A	C130213-08		72G1	Groundwater	12/12/12 14:45
SMSMW07B	C130213-09		72G2	Groundwater	12/11/12 15:55
SMSMW08A	C130213-10		72G3	Groundwater	12/12/12 15:43
SMSMW10B	C130213-11	72G6	72G6	Groundwater	12/12/12 10:25
SMSMW910B	C130213-13	72G5	72G5	Groundwater	12/12/12 10:30



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## DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
CLP16	Initial Calibration Response Erratic
J	The identification of the analyte is acceptable; the reported value is an estimate.

## ACRONYMS AND ABBREVIATIONS

CAS	Chemical Abstracts Service  Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System ( <a href="http://www.epa.gov/srs">www.epa.gov/srs</a> ), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
MDL	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
MRL	Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
TIC	Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.



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Project: 13-0116, Smokey Mountain Smelters - Reported by Jeffrey Hendel

## Organochlorine Pesticides

Project: 13-0116, Smokey Mountain Smelters

Contract Lab Case: 43195

Sample ID: SMSRB121212

Lab ID: C130213-02

MD No: 72F6 CHEM

Station ID:

Matrix: Equipment Rinse Blank

D No: 72F6 CHEM

Date Collected: 12/12/12 11:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
72-54-8	4,4'-DDD (p,p'-DDD)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-55-9	4,4'-DDE (p,p'-DDE)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
50-29-3	4,4'-DDT (p,p'-DDT)	0.10	U, J, CLP16	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
309-00-2	Aldrin	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-84-6	alpha-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5103-71-9	alpha-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-85-7	beta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-86-8	delta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
60-57-1	Dieldrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
959-98-8	Endosulfan I (alpha)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
33213-65-9	Endosulfan II (beta)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
1031-07-8	Endosulfan Sulfate	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-20-8	Endrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
7421-93-4	Endrin aldehyde	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
53494-70-5	Endrin ketone	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
58-89-9	gamma-BHC (Lindane)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5566-34-7	gamma-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
76-44-8	Heptachlor	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
1024-57-3	Heptachlor epoxide	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
72-43-5	Methoxychlor	0.50	U	ug/L	0.50	12/14/12	12/14/12	CLP SOM01.2 P
8001-35-2	Toxaphene	5.0	U	ug/L	5.0	12/14/12	12/14/12	CLP SOM01.2 P





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Project: 13-0116, Smokey Mountain Smelters - Reported by Jeffrey Hendel

## Organochlorine Pesticides

Project: 13-0116, Smokey Mountain Smelters

Contract Lab Case: 43195

Sample ID: SMSMW01A

Lab ID: C130213-04

MD No:

Station ID: SMSMW01A

Matrix: Groundwater

D No: 72F7 CHEM

Date Collected: 12/13/12 14:45

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
72-54-8	4,4'-DDD (p,p'-DDD)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-55-9	4,4'-DDE (p,p'-DDE)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
50-29-3	4,4'-DDT (p,p'-DDT)	0.10	U, J, CLP16	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
309-00-2	Aldrin	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-84-6	alpha-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5103-71-9	alpha-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-85-7	beta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-86-8	delta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
60-57-1	Dieldrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
959-98-8	Endosulfan I (alpha)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
33213-65-9	Endosulfan II (beta)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
1031-07-8	Endosulfan Sulfate	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-20-8	Endrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
7421-93-4	Endrin aldehyde	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
53494-70-5	Endrin ketone	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
58-89-9	gamma-BHC (Lindane)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5566-34-7	gamma-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
76-44-8	Heptachlor	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
1024-57-3	Heptachlor epoxide	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
72-43-5	Methoxychlor	0.50	U	ug/L	0.50	12/14/12	12/14/12	CLP SOM01.2 P
8001-35-2	Toxaphene	5.0	U	ug/L	5.0	12/14/12	12/14/12	CLP SOM01.2 P



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D.A.R.T. Id: 13-0116

Project: 13-0116, Smokey Mountain Smelters - Reported by Jeffrey Hendel

## Organochlorine Pesticides

Project: 13-0116, Smokey Mountain Smelters

Contract Lab Case: 43195

Sample ID: SMSMW02A

Lab ID: C130213-05

MD No:

Station ID: SMSMW02A

Matrix: Groundwater

D No: 72F8 CHEM

Date Collected: 12/13/12 13:49

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
72-54-8	4,4'-DDD (p,p'-DDD)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-55-9	4,4'-DDE (p,p'-DDE)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
50-29-3	4,4'-DDT (p,p'-DDT)	0.10	U, J, CLP16	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
309-00-2	Aldrin	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-84-6	alpha-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5103-71-9	alpha-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-85-7	beta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-86-8	delta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
60-57-1	Dieldrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
959-98-8	Endosulfan I (alpha)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
33213-65-9	Endosulfan II (beta)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
1031-07-8	Endosulfan Sulfate	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-20-8	Endrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
7421-93-4	Endrin aldehyde	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
53494-70-5	Endrin ketone	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
58-89-9	gamma-BHC (Lindane)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5566-34-7	gamma-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
76-44-8	Heptachlor	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
1024-57-3	Heptachlor epoxide	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
72-43-5	Methoxychlor	0.50	U	ug/L	0.50	12/14/12	12/14/12	CLP SOM01.2 P
8001-35-2	Toxaphene	5.0	U	ug/L	5.0	12/14/12	12/14/12	CLP SOM01.2 P



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D.A.R.T. Id: 13-0116

Project: 13-0116, Smokey Mountain Smelters - Reported by Jeffrey Hendel

## Organochlorine Pesticides

Project: 13-0116, Smokey Mountain Smelters

Contract Lab Case: 43195

Sample ID: SMSMW03B

Lab ID: C130213-06

MD No:

Station ID: SMSMW03B

Matrix: Groundwater

D No: 72F9 CHEM

Date Collected: 12/13/12 11:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
72-54-8	4,4'-DDD (p,p'-DDD)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-55-9	4,4'-DDE (p,p'-DDE)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
50-29-3	4,4'-DDT (p,p'-DDT)	0.10	U, J, CLP16	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
309-00-2	Aldrin	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-84-6	alpha-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5103-71-9	alpha-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-85-7	beta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-86-8	delta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
60-57-1	Dieldrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
959-98-8	Endosulfan I (alpha)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
33213-65-9	Endosulfan II (beta)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
1031-07-8	Endosulfan Sulfate	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-20-8	Endrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
7421-93-4	Endrin aldehyde	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
53494-70-5	Endrin ketone	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
58-89-9	gamma-BHC (Lindane)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5566-34-7	gamma-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
76-44-8	Heptachlor	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
1024-57-3	Heptachlor epoxide	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
72-43-5	Methoxychlor	0.50	U	ug/L	0.50	12/14/12	12/14/12	CLP SOM01.2 P
8001-35-2	Toxaphene	5.0	U	ug/L	5.0	12/14/12	12/14/12	CLP SOM01.2 P



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Region 4 Science and Ecosystem Support Division  
980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 13-0116

Project: 13-0116, Smokey Mountain Smelters - Reported by Jeffrey Hendel

## Organochlorine Pesticides

Project: 13-0116, Smokey Mountain Smelters

Contract Lab Case: 43195

Sample ID: SMSMW04A

Lab ID: C130213-07

MD No:

Station ID: SMSMW04A

Matrix: Groundwater

D No: 72G0 CHEM

Date Collected: 12/13/12 8:59

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
72-54-8	4,4'-DDD (p,p'-DDD)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-55-9	4,4'-DDE (p,p'-DDE)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
50-29-3	4,4'-DDT (p,p'-DDT)	0.10	U, J, CLP16	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
309-00-2	Aldrin	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-84-6	alpha-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5103-71-9	alpha-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-85-7	beta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-86-8	delta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
60-57-1	Dieldrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
959-98-8	Endosulfan I (alpha)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
33213-65-9	Endosulfan II (beta)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
1031-07-8	Endosulfan Sulfate	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-20-8	Endrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
7421-93-4	Endrin aldehyde	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
53494-70-5	Endrin ketone	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
58-89-9	gamma-BHC (Lindane)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5566-34-7	gamma-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
76-44-8	Heptachlor	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
1024-57-3	Heptachlor epoxide	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
72-43-5	Methoxychlor	0.50	U	ug/L	0.50	12/14/12	12/14/12	CLP SOM01.2 P
8001-35-2	Toxaphene	5.0	U	ug/L	5.0	12/14/12	12/14/12	CLP SOM01.2 P





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Project: 13-0116, Smokey Mountain Smelters - Reported by Jeffrey Hendel

## Organochlorine Pesticides

Project: 13-0116, Smokey Mountain Smelters

Contract Lab Case: 43195

Sample ID: SMSMW07A

Lab ID: C130213-08

MD No:

Station ID: SMSMW07A

Matrix: Groundwater

D No: 72G1 CHEM

Date Collected: 12/12/12 14:45

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
72-54-8	4,4'-DDD (p,p'-DDD)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-55-9	4,4'-DDE (p,p'-DDE)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
50-29-3	4,4'-DDT (p,p'-DDT)	0.10	U, J, CLP16	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
309-00-2	Aldrin	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-84-6	alpha-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5103-71-9	alpha-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-85-7	beta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-86-8	delta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
60-57-1	Dieldrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
959-98-8	Endosulfan I (alpha)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
33213-65-9	Endosulfan II (beta)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
1031-07-8	Endosulfan Sulfate	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-20-8	Endrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
7421-93-4	Endrin aldehyde	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
53494-70-5	Endrin ketone	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
58-89-9	gamma-BHC (Lindane)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5566-34-7	gamma-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
76-44-8	Heptachlor	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
1024-57-3	Heptachlor epoxide	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
72-43-5	Methoxychlor	0.50	U	ug/L	0.50	12/14/12	12/14/12	CLP SOM01.2 P
8001-35-2	Toxaphene	5.0	U	ug/L	5.0	12/14/12	12/14/12	CLP SOM01.2 P



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Project: 13-0116, Smokey Mountain Smelters - Reported by Jeffrey Hendel

## Organochlorine Pesticides

Project: 13-0116, Smokey Mountain Smelters

Contract Lab Case: 43195

Sample ID: SMSMW07B

Lab ID: C130213-09

MD No:

Station ID: SMSMW07B

Matrix: Groundwater

D No: 72G2 CHEM

Date Collected: 12/11/12 15:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
72-54-8	4,4'-DDD (p,p'-DDD)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-55-9	4,4'-DDE (p,p'-DDE)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
50-29-3	4,4'-DDT (p,p'-DDT)	0.10	U, J, CLP16	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
309-00-2	Aldrin	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-84-6	alpha-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5103-71-9	alpha-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-85-7	beta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-86-8	delta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
60-57-1	Dieldrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
959-98-8	Endosulfan I (alpha)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
33213-65-9	Endosulfan II (beta)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
1031-07-8	Endosulfan Sulfate	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-20-8	Endrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
7421-93-4	Endrin aldehyde	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
53494-70-5	Endrin ketone	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
58-89-9	gamma-BHC (Lindane)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5566-34-7	gamma-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
76-44-8	Heptachlor	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
1024-57-3	Heptachlor epoxide	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
72-43-5	Methoxychlor	0.50	U	ug/L	0.50	12/14/12	12/14/12	CLP SOM01.2 P
8001-35-2	Toxaphene	5.0	U	ug/L	5.0	12/14/12	12/14/12	CLP SOM01.2 P



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## Organochlorine Pesticides

Project: 13-0116, Smokey Mountain Smelters

Contract Lab Case: 43195

Sample ID: SMSMW08A

Lab ID: C130213-10

MD No:

Station ID: SMSMW08A

Matrix: Groundwater

D No: 72G3 CHEM

Date Collected: 12/12/12 15:43

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
72-54-8	4,4'-DDD (p,p'-DDD)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-55-9	4,4'-DDE (p,p'-DDE)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
50-29-3	4,4'-DDT (p,p'-DDT)	0.10	U, J, CLP16	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
309-00-2	Aldrin	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-84-6	alpha-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5103-71-9	alpha-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-85-7	beta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-86-8	delta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
60-57-1	Dieldrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
959-98-8	Endosulfan I (alpha)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
33213-65-9	Endosulfan II (beta)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
1031-07-8	Endosulfan Sulfate	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-20-8	Endrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
7421-93-4	Endrin aldehyde	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
53494-70-5	Endrin ketone	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
58-89-9	gamma-BHC (Lindane)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5566-34-7	gamma-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
76-44-8	Heptachlor	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
1024-57-3	Heptachlor epoxide	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
72-43-5	Methoxychlor	0.50	U	ug/L	0.50	12/14/12	12/14/12	CLP SOM01.2 P
8001-35-2	Toxaphene	5.0	U	ug/L	5.0	12/14/12	12/14/12	CLP SOM01.2 P



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## Organochlorine Pesticides

Project: 13-0116, Smokey Mountain Smelters

Contract Lab Case: 43195

Sample ID: SMSMW10B

Lab ID: C130213-11

MD No: 72G6 CHEM

Station ID: SMSMW10B

Matrix: Groundwater

D No: 72G6 CHEM

Date Collected: 12/12/12 10:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
72-54-8	4,4'-DDD (p,p'-DDD)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-55-9	4,4'-DDE (p,p'-DDE)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
50-29-3	4,4'-DDT (p,p'-DDT)	0.10	U, J, CLP16	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
309-00-2	Aldrin	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-84-6	alpha-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5103-71-9	alpha-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-85-7	beta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-86-8	delta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
60-57-1	Dieldrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
959-98-8	Endosulfan I (alpha)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
33213-65-9	Endosulfan II (beta)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
1031-07-8	Endosulfan Sulfate	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-20-8	Endrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
7421-93-4	Endrin aldehyde	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
53494-70-5	Endrin ketone	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
58-89-9	gamma-BHC (Lindane)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5566-34-7	gamma-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
76-44-8	Heptachlor	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
1024-57-3	Heptachlor epoxide	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
72-43-5	Methoxychlor	0.50	U	ug/L	0.50	12/14/12	12/14/12	CLP SOM01.2 P
8001-35-2	Toxaphene	5.0	U	ug/L	5.0	12/14/12	12/14/12	CLP SOM01.2 P





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Project: 13-0116, Smokey Mountain Smelters - Reported by Jeffrey Hendel

## Organochlorine Pesticides

Project: 13-0116, Smokey Mountain Smelters

Contract Lab Case: 43195

Sample ID: SMSMW910B

Lab ID: C130213-13

MD No: 72G5 CHEM

Station ID: SMSMW10B

Matrix: Groundwater

D No: 72G5 CHEM

Date Collected: 12/12/12 10:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
72-54-8	4,4'-DDD (p,p'-DDD)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-55-9	4,4'-DDE (p,p'-DDE)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
50-29-3	4,4'-DDT (p,p'-DDT)	0.10	U, J, CLP16	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
309-00-2	Aldrin	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-84-6	alpha-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5103-71-9	alpha-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-85-7	beta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
319-86-8	delta-BHC	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
60-57-1	Dieldrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
959-98-8	Endosulfan I (alpha)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
33213-65-9	Endosulfan II (beta)	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
1031-07-8	Endosulfan Sulfate	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
72-20-8	Endrin	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
7421-93-4	Endrin aldehyde	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
53494-70-5	Endrin ketone	0.10	U	ug/L	0.10	12/14/12	12/14/12	CLP SOM01.2 P
58-89-9	gamma-BHC (Lindane)	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
5566-34-7	gamma-Chlordane	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
76-44-8	Heptachlor	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
1024-57-3	Heptachlor epoxide	0.050	U	ug/L	0.050	12/14/12	12/14/12	CLP SOM01.2 P
72-43-5	Methoxychlor	0.50	U	ug/L	0.50	12/14/12	12/14/12	CLP SOM01.2 P
8001-35-2	Toxaphene	5.0	U	ug/L	5.0	12/14/12	12/14/12	CLP SOM01.2 P